No. 5

An Inaugural Essay on the
Medicinal Effects of Cold Applications
in Disease
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On the Medicinal Effects of Cold Applications in Disease

This is a very ancient remedy; employed as far back as the time of the Greeks: and perhaps originated with the father of Medicine himself. The illustrious Celsus employed it at the time in which he cultivated the science with all his ardour and enthusiasm, and was imitated in the practice by his followers. But like many other remedies numbered in the catalogue for the cure of disease, it has met with its rise and fall amid the revolutions and fluctuations which the science of Medicine has undergone, though it still continues to be employed but with no inconsiderable degree of timidity, Especially in Fevers. Cold as a simple remedy would

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seem to call our attention, being one which is always in our power to employ in some one of its forms, and oftentimes proves the most effectual, in combatting disease. Cold water in the form of a bath is not only preeminently useful in a state of disease but likewise of the highest utility in preserving that state of the system, which we denominate health. hence the practice of bathing is much resorted to by the people of almost every nation. We are all sensible of the refreshing effects produced, by the cold bath in the sultry days of Summer; the system which was feeble and exhausted from the influence of excessive heat becomes cool and tranquil, refreshed, and invigorated. Perhaps the utility of bathing is no where more beautifully expressed than in the lines of our favourite poet. — " — " — " — " — "

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" This is the purest exercise of health,
" The kind refresher of the Summer heats;
" Nor when cold winter keens the brightening flood,
" Would I weak shivering linger on the brink.

Having made a few introductory remarks on our remedy as conducive to health, I pass to its consideration in disease to which is attached its great importance. But before proceeding to say I shall first make a few remarks on the different modes in which the Application is made. There are three forms in which cold water has been employed in the cure of disease viz By Affusion, Ablution, and by ~~Immersion~~. As to the superiority of these, each mode is perhaps adapted to its particular case. The first is that in which the most powerful impression is made on the System at large; and is suited to our more robust patients, in decent fevers of high action. The other two modes would seem more properly adapted to females whose delicacy of frame and constitution would

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render render it hazardous to employ it in the form of Affusion. The Modus operandi of our remedy is perhaps principally in the following ways. 1st By Abstracting heat from the surface: thereby reducing the temperature of the whole body to that point at which diaphoresis might be induced: 2nd By a strong and powerful impression made on the nervous system; breaking down the chain of morbid actions: 4th By imparting tone and strength to the system. — —

We should never resort to cold in any of its forms where there is the slightest tendency to chilliness or a sinking condition of the system, though it has here been recommended to precede the remedy by giving stimulants internally. — .. — .. — .. —

Where there is congestions in the abdominal or biliary systems, it should always be preceded by proper precautions. . — . — — — —

The mode of using it shall be such as the discrimination and judgment of the practitioner shall warrant.

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I first begin with its considerations in fevers

1st In Intermittent Fevers Employed at the height of the hot stage in this species of fever, it is said to prove of the greatest utility, in bringing about a speedy solution of the paroxism. It is perhaps more particularly adapted to those intermittents not preceded by much chill and followed by a high degree of febrile action, with a hot and dry skin. It has been directed to be employed several hours before the expected paroxism or immediately after the hot stage has commenced. The latter would seem the most proper of the two periods for its application, though perhaps by resorting to it before the expected attack the paroxism would be rendered much milder, or altogether prevented. — .. — .. —

It may perhaps be followed with equal good results in the different species of this disease viz. In the Quotidian, the Tertian, and the Quartan much depending upon the circumstances of the case. — .. — ..

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In Remittent Fever our remedy is not less well adapted; employing it at the height of the paroxysm when the fever and delirium are high and the headache violent, it is productive of the very best results. By dashing cold water upon the patient we may render the symptoms more lenient or ameliorate their more threatning aspect and perhaps convert the type of the disease, into that of an intermittent. — — What I have already said of the cold affusion will equally apply in continued fevers and especially in our bilious inflammatory fever, under circumstances which might justify the practice. But here as I have already stated we should in every case precede the remedy by proper evacuations from the Alimentary canal

In Typhus Fever our medicine is said to have proved of unequivocal utility. We are told by Dr. Currie, that out of seventeen patients whom he found to have the symptoms of the disease upon

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them: in fifteen the further progress of the disease was arrested by the cold affusion, and in only two out of this number the fever run its course. He informs us the most safe and advantageous time for its application is when the exacerbation is at its height or immediately after the declination has begun. Thus it proves of the greatest benefit by abstracting heat from the surface and in relieving that state of restlessness which attends and in equalizing the temperature of the whole body. The above goes very far in establishing the credit of this practice in Typhus fever. From the statements of Dr Currie and other practitioners of equal authority, the remedy should not be overlooked in the treatment of this destructive disease. It is perhaps in the forming stage that the cold affusion is productive of such manifest advantage, as we must be cautious how we too deliberately resort to it in the advanced stages of the disease. The propriety of this precaution may be seen in the following — — — —

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A well known quack in the state of New Jersey who has long with fraud and empiricism cheated the eyes of the publick, was called to a patient labouring under a low and malignant form of fever: after having used many remedies without any good effect, and the system having sunk so low that it would not raise a blister our ingenious son and descendant of Hippocrates having perhaps heard of cold water being sometimes resorted to in fevers took advantage of the moment, by taking one of the sheets from the bed in which his patient lay, and wringing it out slightly in a vessel of cold water and then wrapping the unhappy victim completely within it, saying, that was the last remedy he could administer; which proved sorrofully true for in the elapse of an hour this patient was divested of the remaining spark of life and hurried to another world. Thus fell a human being by the hands of Ignorance and Empiricism.

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The cold affusion has been employed with favourable results in Yellow fever. When employed in the early part of the disease it is productive of its good effects by destroying the further progress of the disease. Cold water has likewise been directed to be taken as a drink internally in these cases and is said to have moderated the excessive heat and thirst which prevails, to such an alarming degree, and promoting in the end a considerable diaphoresis.
Not less well authenticated facts are related of the importance of cold affusion in one of the most loathsome of human maladies, the plague.
It is said that cures of this dreadful affection have been completely performed by patients exposing themselves naked to the cold dews and damp air of the night. — — — — — — — —
A French Soldier who laboured under this disease threw himself into the Nile in a violent fit of Delirium and recovered in a short time from the disease after he was taken out of the water.

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Not a little has been said of the remedy in the Exanthematous affections. In the incipient stage of Scarlatina where the skin is hot, and dry and the pulse frequent, the cold affusion is said to be very serviceable. We are told that when thus employed it prevents any Efflorescence on the skin or any affection of the throat from taking place. It has also been resorted to in Small pox during the eruptive fever and is highly extolled for rendering the eruption much milder and abating the pain in the head and back. What I have said here will perhaps equally apply in some of the other exanthemata.

In diseases of the muscular system cold applications have been more or less resorted to. To relieve the pain in Gout cold applications have been highly celebrated, especially when brought in contact with the affected joint. This is no new practice it was noticed by Celsus and even by Hippocrates himself.

But perhaps on the whole it is a dangerous expedient and one which should not at all be resorted to untill

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the stomach is properly fortified and shows signs of performing its functions with its accustomed energy: and no greater degree of cold should be applied or continued than will be sufficient to subdue the local Inflammation. What I have said of the cold bath in Gout will equally apply in the chronic form of Rheumatism. — — — — ——

In obstinate constipation cold water is entitled to a just and deserved praise. It has been directed to be used in the form of Enema or by dashing it upon the surface of the body. this was one of the favourite remedies of that truly great patron of Physicians Dr Rush. Hence this remedy may be used with great advantage, in all those diseases in which this condition of the bowels is found to exist. — — — — — —

In the different Hemorrhagies cold in its different forms has been highly extolled. In Epistaxcis or Bleeding from the nose which would seem comparatively a hemorrhage of little consequence, and scarcely demanding

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attention from the practitioner. But it sometimes proves a source of serious inconvenience to the patient. But trivial or serious as it may appear, the bleeding is generally immediately suppressed by snuffing cold water up the nostrils. Clothes wet with cold water and applied to the temples - back of the neck, and to the ascilla are sometimes of much service. There is another form recommended on high authority, that of immersing the scrotum in a vessel of cold water, and is said to have completely succeeded when the other modes have intirely failed. The modus operandi does not seem very evident being one among the many cases in which it is difficult to say in what manner it is productive of its good effects.

In Hæmoptysis we are persuaded that our remedy is not altogether destitute of efficacy. Cold in some one of its forms is generally resorted to as an auxiliary means, to restrain bleeding from the lungs. Clothes diped in cold water and applied to the chest, and ascilla, and again wet as they become dry, cannot but be allowed as

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having done good. By dashing water from a vessel directly upon the thorax a greater impression would be communicated to the pulmonary organs and as the mode cannot prove in the least degree hazardous, perhaps it will be attended in every case with still greater success. — — — — — — —

In Hematemesis. Cold conjoined with other medicines is perhaps the leading indication in suppressing the flow of blood from that important organ the stomach. To answer this end cold drinks, such as water in which ice has been dissolved, Lemonade, &c. these means will generally succeed in restraining this species of hemorrhage. Nor are cold applications less beneficial in uterine hemorrhage. Clothes wet with cold water and applied to the abdomen, cold astringent injections, and even a piece of ice may be introduced into the uterus with great advantage. The above named remedies conjoined with cold drinks, and the apartment kept cool and well ventilated, constitutes a great part of the treatment in this case. ———

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No small degree of difficulty is sometimes experienced in suppressing the flow of blood from a vein after the common operation of venesection. a stream of cold water directed upon the part will commonly prove immediately successful in restraining the bleeding. — — —

Having taken a cursory view of our medicines in the different hemorrhagies, I shall next pass to its consideration in some of the other local affections.
In inflammation produced by various causes the utility of cold applications is well known. — —
In that species of inflammation which occurs after luxations cold is perhaps our best remedy: by pouring the fluid directly upon the inflamed joint several times each day, or by keeping clothes applied wet with a solution of the acetate of lead is very speedy and effectual in soothing the pain and abating the inflammation. In the utility of the remedy here I can bear testimony myself: having some years ago luxeated my thumb at the first joint and seizing hold of it

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with my other hand I succeeded in reducing it myself: being directed to pour cold water upon the joint every two or three hours during the day, I had reason to be much pleased with the remedy; little or no swelling took place, but a slight degree of pain or soreness followed; and in the space of a week or ten days I could use my thumb with as much facility, as the other. In that derangement and debility which takes place in the functions of a part, produced by a bruise which is the most simple form in which an accident can occur, cold conjoined with pressure is all that is demanded in affecting a cure.
By a body falling directly upon a part or by its being being caught between two opposing bodies there is frequently an effusion of blood beneath the skin or in the cellular tissue, cold and moderate pressure to the part promotes the action of the absorbents and in a short time the effusion disappears.
In that kind of inflammation which results from a slight burn, there is perhaps nothing suited to relieve the

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heat and smarting which attends, so well as cold in some one of its forms. By pouring cold water upon the part or keeping it immersed in a vessel of this fluid it affords the greatest possible relief. As a more convenient and permanent application, scraped potatoes may be had recourse to; these contain their refrigerant power for a great length of time. — — —

From the escharotics which are employed to destroy the nature of venereal ulcers on the penis, swelling of the inguinal glands is in general the consequence, from the irritation thus produced. It would seem to follow as a general rule, that as soon as the ulcer healed, the swelling and induration of the glands would immediately subside, But this is by no means always the case for they will remain in an indurated state for a long time afterwards, although no absorption of the venereal virus has taken place. here the application of cold and pressure to the tumour strenuously employed will in the end cause it completely to subside. —

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Every Surgeon of Eminence is aware of the good Effects which result from the application of cold as an auxiliary remedy in promoting the reduction of a strangulated hernial tumour. Mr Wilmer of Coventry highly recommends this practice, and Dr Dorsey concurs in the same opinion who found it in many cases completely successful; it may be applied in the form of pounded ice to the tumour.
But caution is here particularly required, that the ice be not suffered to remain so long in contact with the tumour, as to freeze the integuments an accident which is said to have occured and almost inseparable mischief was the consequence.
As a preventative of inflammation of the brain and its coverings in cases of violent concussion, cold Applications are the only measures resorted to until a reaction has taken place, they should be applied to the temples in the forms already mentioned.
The practice of resorting to stimuli in cases of this kind must appear a hazardous and absurd

practice to every modern Surgeon, thereby exposing the patient to a much greater risk of inflammation of that important organ the brain ~~thereby~~ after a reaction has taken place in the system. — — —
In Hydrocele & Hematocele cold applications are sometimes of much advantage; In recent cases of these diseases by pouring a stream of cold water upon the scrotum will frequently succeed in producing an absorption of the effused fluid, and thereby effect a complete cure. In a paralysed condition of the extremeties, evidence is not wanting of its good effects, employed several times each day it gradually restores strength and motion to the limbs. In Scrofula, the cold bath is said to be very advantageous in preventing the progress of this abhorred Malady, and is particularly recommended in the form of sea bathing; it is however said to be more efficacious when preceded by the warm bath. —
Dr Otto attending Physician to the Pennsylvania Hospital employs cold affusion in cases of prolapsus ani,

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he directs water to be dashed upon the nates of the patient several times during the day; the Modus operandi would seem very evident, the tonic impression made upon the parts gradually ~~recovers~~ enables them to recover their natural tone.

Where there is general debility prevailing in the system from various causes the cold bath in some cases is of signal advantage. There seems to be in some cases a predisposition to this condition of the system and this is more particularly observed in children arising from no very evident cause. By immersing the child in a cold bath every morning for a longer or shorter period, this predisposition will at last be overcome and the child become vigorous, healthy, and robust.

Thus we have seen that the action of our remedy is certainly that of a tonic among its other important operations of proving so highly beneficial. It imparts tone to the fibre, energy to the nerve, and renders all

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Thus water the medium through which the effect and Efficacy of our remedy is attained, is of incomparable, and unequalled utility. Destitute of this important fluid man nor the inferior orders of creation could exist or vegetation bring forth its plentiful productions. It descends in the form of rain to nourish the innumerable families of plants dispersed upon the surface of the earth, and bears the heavy laden ship upon its bosom, it thunders in the cataract, roars in the ocean, and murmurs in the rivulet. It at one time strikes man with terror and dread, at another with joy; it is this daily consumption while in health and this remedy in disease.
Thus have I brought to a close the few ill digested remarks on the medicinal effects of cold applications in disease, leaving the subject to those who are more competent than myself of completing the task.